

**Claims**

1. An axial piston machine (1) with a rotatably mounted cylinder drum (5), which comprises a central recess (38) and a plurality of cylinder bores (6) extending approximately axially relative to the central recess (38), in which bores (6) pistons (7) are movably guided, which are supported on a swash plate (11) via guide shoes (8), which are guided in recesses (23) in a return plate (22), 10 in the centrally arranged internal bore (25) of which there is guided a return member (26) with an outer surface corresponding to the internal bore (25) in the return plate (22), the return member (26) being exposed to a pretensioning force in the axial direction via at least one 15 pressure pin (28) by means of a tension spring (27),  
**characterised in that**  
each pressure pin (28) comprises a surface enlargement (43) radial relative to its longitudinal axis (34) at its bottom end (40) facing the return member (26).

20  
2. An axial piston machine according to claim 1,  
**characterised in that**  
the return member (26) is exposed to a pretensioning force in the axial direction via a plurality of pressure 25 pins (28) by means of a tension spring (27).

3. An axial piston machine according to claim 2,  
**characterised in that**  
the pressure pins (28) are arranged equidistantly in a 30 circle concentric to the central recess (38).

4. An axial piston machine according to claim 2 or claim 3,  
**characterised in that**

the pretensioning force of the tension spring (27) is transmitted to the pressure pins (28) via a spring washer (30).

5 5. An axial piston machine according to claim 4,  
**characterised in that**  
each pressure pin (28) comprises a surface enlargement (32) radial relative to its longitudinal axis (34) at its top end (31) opposite its bottom end (40) and facing the spring  
10 washer (30).

6. An axial piston machine according to claim 5,  
**characterised in that**  
a retaining hook (36, 44) is provided in each case at the  
15 outer edge of the two surface enlargements (32, 43) of each pressure pin (28).

7. An axial piston machine according to claim 6,  
**characterised in that**  
20 each retaining hook (36, 44) at the end of the respective surface enlargement (32, 43) of each pressure pin (28) projects in each case approximately perpendicularly out of the bearing surface (35, 45) formed by the end face of a basic member (34) and in each case the end face of the  
25 surface enlargement (32) and (43).

8. An axial piston machine according to claim 6 or claim 7,  
**characterised in that**  
each retaining hook (44) at the end of the surface  
30 enlargement (43) at the bottom end (40) of each pressure pin (28) is introduced in each case into an opposing bore (47) in the return member (26).

9. An axial piston machine according to claims 6 to 8,  
**characterised in that**,  
at the top end (31) of the pressure pins (28), the  
retaining hooks (36) at the end of the surface enlargement  
5 (32) enclose the spring washer (30).

10. An axial piston machine according to claims 1 to 9,  
**characterised in that**  
the bearing surface (45), formed from the end face of the  
10 surface enlargement (43) and the end face of the basic  
member (34), at the bottom end (40) of each pressure  
pin (28) exhibits at least twice as large a surface area as  
the end face of the basic member (34) of the pressure  
pin (28).

15

11. An axial piston machine according to any one of  
claims 5 to 9,  
**characterised in that**  
the outer edges of the bearing surfaces (35) of the surface  
20 enlargements (32) at the top end (31) of two diametrically  
opposed pressure pins (28) exhibit a spacing which  
corresponds to the external diameter of the spring  
washer (30).

25 12. An axial piston machine according to any one of  
claims 5 to 9 or 11,  
**characterised in that**  
one or both of the two surface enlargements (32, 43) of  
each pressure pin (28) is/are provided on one side relative  
30 to the longitudinal axis (34) of the pressure pin (28).

13. An axial piston machine according to any one of  
claims 1 to 12,

**characterised in that**

each pressure pin (28) exhibits the same length.

5

14. An axial piston machine according to any one of  
claims 1 to 13,

**characterised in that,**

in the central recess (39) of the rotatably mounted

10 cylinder drum (5), a shaft (4) acts in the manner of a  
drive by means of a spline profile and the pressure pins  
are guided through the spline profile.

15. An axial piston machine according to any one of

15 claims 1 to 14,

**characterised in that**

the surface enlargement (43) of each pressure pin (28)  
engages in a pocket (50) provided in the return  
member (26).

20

16. An axial piston machine according to claim 15,

**characterised in that,**

at the outer edge of at least one of the two surface  
enlargements (43) of each pressure pin (28), there is in  
25 each case provided a retaining hook (44) and  
in that the retaining hook (44) engages in each case in a  
recess (51) in the associated pocket (50).

17. A pressure pin (28) having a surface enlargement (32)

30 provided at the top end (31) of the pressure pin (28),

**characterised in that**

a surface enlargement (43) is likewise provided at the bottom end (40) of the pressure pin (28) opposite the top end (31).

5 18. A pressure pin according to claim 17,  
**characterised in that**  
a retaining hook (36) and (44) is provided at the outer edge of each of the two surface enlargements (32, 43) of the pressure pin (28).

10

19. A pressure pin according to claim 18,  
**characterised in that**  
the retaining hook (36, 44) projects at the end of each of the two surface enlargements (32, 43) of the pressure pin (28) in each case approximately perpendicularly out of the bearing surface (35, 45) of the pressure pin (28) formed in each case by the end face of a basic member (34) and the end face of the surface enlargement (32, 43).

20 20. A pressure pin according to any one of claims 17 to 19,  
**characterised in that**  
the bearing surface (45) of the pressure pin (28) formed by the end face of the surface enlargement (43) at the bottom end (40) of the pressure pin (28) and the end face of the basic member (34) exhibits at least twice as large a surface area as the end face of the basic member (34) of the pressure pin (28).

21. A pressure pin according to claims 17 to 20,  
30 **characterised in that**  
one or both of the two surface enlargements (32, 43) of the pressure pin (28) is provided on one side relative to the longitudinal axis (34) of the pressure pin (28).